

comprising said bridging element for connecting said pair of spaced-apart planar plug walls is made of a unitary piece of stamped metal.

64. (New) A receptacle connector for power applications, comprising:

an insulative receptacle housing;

at least one conductive receptacle contact within said receptacle housing, said receptacle contact comprising a pair of spaced-apart receptacle walls, each of said spaced-apart receptacle walls having separate press-fit terminal contacts at an end thereof, forming there between an open plug contact receiving space, each of said pair of spaced-apart receptacle walls further having a dimension extending in a direction parallel to the axis which a plug is inserted in said open plug contact receiving space.

REMARKS

Claims 55-66 are pending, of which claims 55-58 are rejected and claims 59-64 are new.

Claims 55 and 58 have been rejected under the judicially created doctrine of obviousness-type double patenting over co-pending patent application serial number 09/886,432. When the Examiner indicates allowable subject matter in this patent application, the appropriate terminal disclaimer will be submitted.

Claims 55-58 are rejected under 35 USC §112, ¶2. First, the Examiner states that it was unclear how the receptacle walls could extend perpendicular to and intersect the axis. To correct the confusion, the last two lines of paragraph (a) of claim 55 have been reworded. Second, the Examiner was not sure what plate of the spaced walls was referring to. "Plate" has been changed to --beam--. Third, the Examiner

questioned how the plates could extend in a plane parallel to the receptacle wall. To correct the confusion, the last two lines of paragraph (b) of claim 55 have been reworded. Fourth, the Examiner states that there are no differences in scope between claims 56 and 57. However, Applicant disagrees. While claim 57 requires the narrower limitation that the axis is generally horizontal, i.e., generally parallel to the horizontal, claim 56 merely requires the axis not be generally coincident with the vertical. The latter is a much broader concept. Finally, concerning claim 58, there is reference to this aspect of the invention in the specification. The Examiner should refer to, for example, p. 5, lines 18-20 and p. 8, lines 8-12.

Claims 55-58 were rejected under 35 USC §103(a) as being unpatentable over Davis ('843). This rejection is traversed.

Davis '843 discloses an electrical connector for power and signal contacts. At issue here are the power contacts, disclosed in Figures 3, 9 and 11. These plug and receptacle contacts are very different than those of the invention.

Concerning claims 55-57 and despite the Examiner's allegation to the contrary, Davis '843's plug contact (Figure 3) only has one planar plug wall. This can best be seen in Davis' Figures 1 and 2, marked up versions of which have been enclosed for the Examiner's convenience and review. Furthermore, reference should be made to col. 3, lines 25-39, where Davis discusses *the* body portion 17 and its connection to terminations 22. Two spaced-apart planar walls are important so that more current can be passed through the plug for power applications *and* air can pass between the two walls to dissipate heat. Davis is not nearly that capable.

Concerning claim 58, as shown in Davis' Figure 6, Davis's projecting section (i.e., the area between fingers 9) is not unobstructed. Rather, at least divider 7, lances 20,

and the web having grooves 19 therein fill the area between fingers 9. These various members will inhibit heat flow. Accordingly, Davis does not render this claim obvious.

Concerning new claims 59-60, these claims contain their own allowable subject matter but should be allowable at least because they depends from claim 55, which should be allowable.

Concerning new claims 61-64, these claims are directed to individual plug and receptacle contacts for power applications rather than a connector system, like claim 55. These plug and receptacle contacts are structurally different and unobvious from Davis '483.,

All claims being allowable, an early indication as such by the Examiner is requested.

Respectfully submitted,



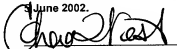
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I hereby certify that this correspondence is being deposited with the U.S. Postal Service as First Class Mail in an envelope addresses to: Assistant Commissioner for Patents, Washington, D.C. 20231 on

June 2002.



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6/5/02

Date of Signature

Marked-Up Version to Show Changes

55. (NewOnce Amended) A set of electrical ~~Electrical~~ connectors matable with each other by movement towards each other along an axis, comprising:

(a) a power receptacle comprising an insulative receptacle housing having at least one conductive receptacle contact, said receptacle contact comprising a pair of spaced-apart planar receptacle walls forming therebetween an open plug contact receiving space, each of said pair of planar receptacle walls having a dimension extending in a plane perpendicular to and intersecting direction parallel to said axis; and

(b) a power plug comprising an insulative plug housing having at least one conductive plug contact, said plug contact comprising a pair of spaced-apart planar plug walls, said spaced-apart planar plug walls each having a plate-beam extending therefrom, said plates-beams forming a projecting section engageable in the plug receiving space of the receptacle contact, said plates-beams of said projecting section being opposed and spaced from each other by a distance less than a distance between said receptacle walls, said plug walls and said plates extend in a plane parallel to said receptacle walls.

56. (Original) The connectors according to claim 55 wherein said axis is generally non-vertical.

57. (Original) The connectors according to claim 55 wherein said axis is generally horizontal.

58. (Original) The connectors according to claim 55 wherein said projecting section

forming an unobstructed medial air gap wherein heat building up in said unobstructed medial air gap may flow and leave said gap without obstruction.

Please add the following new claims:

59.(New) The connectors according to claim 55, wherein each beam of each said projecting section is unitary with its respective planar plug wall.

60.(New) The connectors according to claim 55, wherein each of said spaced-apart planar plug walls are coplanar with each of said beams.

61.(New) A plug connector for power applications, comprising:

an insulative plug housing;

at least one conductive plug contact within said insulative housing; said plug contact comprising a pair of spaced-apart planar plug walls, said spaced-apart planar plug walls each having a unitary beam extending from one end thereof and terminal contacts from another end thereof, said beams forming a projecting section engageable in a plug receiving space of a receptacle contact.

62.(New) The plug connector according to claim 61, further comprising a bridging element for connecting said pair of spaced-apart planar plug walls.

63.(New) The plug connector according to claim 62, wherein said plug contact comprising said bridging element for connecting said pair of spaced-apart planar plug walls is made of a unitary piece of stamped metal.

64. (New) A receptacle connector for power applications, comprising:

an insulative receptacle housing;

at least one conductive receptacle contact within said receptacle housing, said receptacle contact comprising a pair of spaced-apart receptacle walls, each of said spaced-apart receptacle walls having separate press-fit terminal contacts at an end thereof, forming there between an open plug contact receiving space, each of said pair of spaced-apart receptacle walls further having a dimension extending in a direction parallel to the axis which a plug is inserted in said open plug contact receiving space.

